

Listing of the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A process for ~~starting-up~~ an olefin polymerization comprising (a) starting up the polymerization reaction in a gas-phase fluidized-bed reactor using a catalyst comprising a metallocene to produce a start-up polyolefin having a melt flow rate greater than 4.5 g/10 min; and (b) continuing the polymerization reaction and gradually decreasing the melt flow rate of the polyolefin to having a melt flow rate of less than 4 g/10 min, wherein the melt flow rate is measured at 2.16 kg and ~~a temperature of 190°C in accordance with ISO 1133, and wherein said polyolefin produced has an increased melt flow rate of above 4 g/10 min during a transitional period during a start-up phase wherein said start-up phase of step (a) has a duration of 30 minutes to 30 hours and said process is performed at a reaction temperature.~~
2. (Currently amended) The process of claim 1, wherein the start-up phase of step (a) has a duration of 2 hours to 20 hours.
3. (Canceled).
4. (Currently amended) The process of claim 1, wherein the reaction temperature in step (a) is ~~increased prior to the start-up phase by at least 1°C in comparison to~~ higher than the reaction temperature in step (b) ~~used in a long-term operation.~~
5. (Currently amended) The process of claim 4, wherein the reaction temperature in step (a) is ~~increased by 1.5 to 4°C~~ higher than ~~in comparison to the reaction temperature in step (b) used in a long-term operation prior to the start-up phase.~~

6. (Currently amended) The process as claimed in claim 4, wherein the reaction temperature in step (b) during the long-term operation is in a range bounded by an upper limit given by equation I

$$T_{RH} = 170 + \frac{6d'}{0.84 - d'} \quad (I)$$

and a lower limit given by equation II

$$T_{RN} = 173 + \frac{7.3d'}{0.837 - d'} \quad (II)$$

wherein,

T_{RH} is a maximum reaction temperature in °C

T_{RN} is a minimum reaction temperature in °C

d' is a value of a density of the polymer to be produced.

7. (Previously amended) The process of claim 1, wherein the melt flow rate is regulated by hydrogen concentration in the reactor.

8. (Previously amended) The process of claim 1, wherein the melt flow rate is regulated by a monomer partial pressure in the reactor.

9. (Previously amended) The process of claim 1, wherein the polyolefin is a homopolymer or copolymer of ethylene.

10. (Canceled).

11. (Previously amended) The process as claimed in claim 1, wherein the metallocene is selected from bis(1-methyl-3-butylcyclopentadienyl)zirconium dichloride or bisindenylzirconium dichloride.

12. (Previously amended) The process of claim 1, wherein an alkylaluminumoxane is used as an activating compound.